Catalysis engineering for sustainable technologies

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Abstract

Heterogeneous catalysis is quite possibly the most relevant discipline in the chemical industry, spearheading improvements in process sustainability by improving the exploitation of raw materials, enabling the transition from fossil to renewable feedstocks, reducing energy consumption, and minimizing the environmental footprint. To confront these challenges head on, this vibrant discipline is becoming increasingly design-driven, a shift which is facilitated by the availability of increasingly powerful tools that enable the continued development of fundamental knowledge over different time and length scales. The design of a hetero9(k)-3.74926Tms catalyst, a dream not long ago, is becoming a reality. In this talk, I will discuss recent examples from my laboratory to illustrate how this intellectual growth in the understanding of catalyzed processes can kindle revolutionary technological advancements.

Biography

Javier Pérez-Ramírez studied Chemical Engineering at the University of Alicante and received his PhD degree a